

Title (en)
INJECTION DEVICE

Title (de)
INJEKTIONSVORRICHTUNG

Title (fr)
APPAREIL D'INJECTION

Publication
EP 2021054 B2 20200304 (EN)

Application
EP 07733015 A 20070530

Priority
• GB 2007001999 W 20070530
• GB 0610856 A 20060601

Abstract (en)
[origin: US2010016794A1] An injection device 110 is described having a housing 112 that receives a syringe 114 having a needle 118, wherein the syringe is supported in a syringe carrier 150. The syringe 114 and syringe carrier 150 are biased by a return spring 126 from an extended position in which the needle 118 extends from the housing 112 through an exit aperture 128 to a retracted position in which it does not. A drive spring 130 acts via a drive to advance the syringe 114 from its retracted position to its extended position and discharge its contents through the needle 118 and a return spring 126, brought into play when the drive has reached a nominal return position, restores the syringe 114 to its retracted position. The syringe carrier 150 is designed to restrict rearward movement of the syringe so that the injection device is less prone to failure and damage to its components than prior art devices.

IPC 8 full level
A61M 5/20 (2006.01)

CPC (source: EP GB KR NO US)
A61M 5/20 (2013.01 - KR); **A61M 5/2033** (2013.01 - EP GB NO US); **A61M 5/31** (2013.01 - GB); **A61M 5/315** (2013.01 - KR);
A61M 5/3202 (2013.01 - EP NO US); **A61M 5/3204** (2013.01 - EP US); **A61M 5/326** (2013.01 - EP NO US);
A61M 2005/2013 (2013.01 - EP NO US); **A61M 2005/206** (2013.01 - EP NO US); **A61M 2005/208** (2013.01 - EP NO US)

Citation (opposition)

- Opponent :
- US 3880163 A 19750429 - RITTERSKAMP JACK H
 - US 4231368 A 19801104 - BECKER MICHAEL
 - US 4787891 A 19881129 - LEVIN PAUL D [US], et al
 - US 2531267 A 19501121 - FRITZ HARNISCH
 - GB 143084 A 19200520 - EDMONDO LUSWERGH
 - US 6692469 B1 20040217 - WEEKES STUART [GB], et al
 - US 5514097 A 19960507 - KNAUER PETER M [US]
 - US 6544234 B1 20030408 - GABRIEL JOCHEN [DE]
 - US 2005277896 A1 20051215 - MESSERLI WALTER [CH], et al
 - GB 2438591 A 20071205 - CILAG GMBH INT [CH]
 - US 2005101919 A1 20050512 - BRUNNBERG LENNART [SE]
 - US 2005115507 A1 20050602 - HALACHMI ILAN [IL], et al
 - WO 2005070481 A1 20050804 - MEDICAL HOUSE PLC [GB], et al
 - WO 2006106295 A1 20061012 - CILAG AG INT [CH], et al
 - DE 20311996 U1 20031016 - HOELZLE DIETER TECH PROJEKTE [DE]
 - EP 1518575 A1 20050330 - MATSUSHITA ELECTRIC IND CO LTD [JP]
 - WO 2006106293 A1 20061012 - CILAG GMBH INT [CH], et al
 - WO 2005009515 A1 20050203 - SID TECHNOLOGIES LLC [US], et al
 - US 2006030819 A1 20060209 - YOUNG MATTHEW E [GB], et al
 - US 6280421 B1 20010828 - KIRCHHOFER FRITZ [CH], et al
 - DE 10207276 A1 20030911 - DISETRONIC LICENSING AG [CH]
 - EP 1208858 A1 20020529 - VERSINI PAOLO [IT]
 - US 3702608 A 19721114 - TIBBS ROBERT C
 - US 5480387 A 19960102 - GABRIEL JOCHEN [DE], et al
 - WO 2005030301 A1 20050407 - BECTON DICKINSON FRANCE [FR], et al
 - WO 2004087242 A1 20041014 - SEDAT [FR], et al
 - FR 2861310 A1 20050429 - PLASTEF INVESTISSEMENTS [FR]
 - WO 2006050304 A1 20060511 - SAFETY SYRINGES INC [US], et al
 - WO 0024441 A1 20000504 - PHARMACIA & UPJOHN AB [SE], et al
 - EP 0941133 A1 19990915 - BECTON DICKINSON CO [US]
 - US 5713866 A 19980203 - WILMOT JOHN GLYNDWR [US]
 - Extract from ISO standard 11040-4:1996(E)

Cited by
US9649443B2; US9861753B2; US10525202B2; US10653843B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

US 2010016794 A1 20100121; US 9757520 B2 20170912; AT E461720 T1 20100415; AU 2007266802 A1 20071206;
AU 2007266802 B2 20120628; BR PI0712697 A2 20120703; BR PI0712697 B1 20180710; BR PI0712697 B8 20210622;
CA 2653762 A1 20071206; CA 2653762 C 20161011; CN 101454035 A 20090610; CN 101454035 B 20120125; DE 602007005474 D1 20100506;
DK 2021054 T3 20100621; DK 2021054 T4 20200602; EA 014060 B1 20100830; EA 200870613 A1 20090428; EP 2021054 A1 20090211;
EP 2021054 B1 20100324; EP 2021054 B2 20200304; ES 2340733 T3 20100608; ES 2340733 T5 20201005; GB 0610856 D0 20060712;
GB 2438591 A 20071205; GB 2438591 B 20110713; IL 195552 A0 20090901; IL 195552 A 20110630; JP 2009538664 A 20091112;

JP 5015244 B2 20120829; KR 101378323 B1 20140327; KR 20090014376 A 20090210; MX 2008015351 A 20090211;
NO 20085324 L 20090302; NO 344332 B1 20191104; NZ 573350 A 20101224; PL 2021054 T3 20100831; PL 2021054 T5 20201005;
PT 2021054 E 20100423; UA 92396 C2 20101025; WO 2007138317 A1 20071206; ZA 200810343 B 20091125

DOCDB simple family (application)

US 30147807 A 20070530; AT 07733015 T 20070530; AU 2007266802 A 20070530; BR PI0712697 A 20070530; CA 2653762 A 20070530;
CN 200780020035 A 20070530; DE 602007005474 T 20070530; DK 07733015 T 20070530; EA 200870613 A 20070530;
EP 07733015 A 20070530; ES 07733015 T 20070530; GB 0610856 A 20060601; GB 2007001999 W 20070530; IL 19555208 A 20081127;
JP 2009512666 A 20070530; KR 20087029992 A 20070530; MX 2008015351 A 20070530; NO 20085324 A 20081219;
NZ 57335007 A 20070530; PL 07733015 T 20070530; PT 07733015 T 20070530; UA A200815081 A 20070530; ZA 200810343 A 20081205